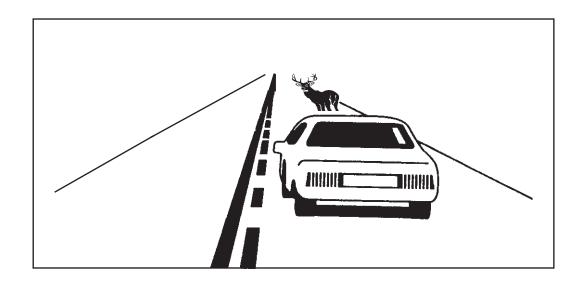
### MISSOURI STATE HIGHWAY PATROL



### ANALYSIS OF DEER INVOLVEMENT IN MISSOURI TRAFFIC CRASHES 2003

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### INTRODUCTION

In recent years, Missouri traffic safety authorities have expressed concern over (1) animal-vehicle crashes involving deer and (2) crashes caused by drivers avoiding deer on roadways. This is one in a series of reports designed to identify the seriousness and characteristics of deer-involved traffic crashes on Missouri's public roadways.

### 1. METHODOLOGY

To assess the problem of 2003 deer-related traffic crashes in Missouri, two information sources were utilized. In the first instance, data from the National Highway Traffic Safety Administration (NHTSA), Fatality Analysis Reporting System (FARS) were analyzed. In this analysis, fatal crashes were identified where the first harmful event involved a motor vehicle striking a deer. In addition, fatal crashes were identified where drivers made evasive maneuvers to avoid deer and no deer were struck but their evasive maneuvers contributed to the cause of the traffic crash.

The second source of information used in this study was the Missouri Statewide Traffic Accident Records System (STARS). Using STARS data, all 2003 Missouri traffic crashes where a deer was struck as part of the first harmful event were identified and analyzed (not just fatal crashes). However, this information source was limited in that it did not contain data identifying traffic crashes involving a deer avoidance maneuver where the animal was <u>not</u> struck. As a result, analysis could not be conducted on the deer avoidance maneuver problem associated with all Missouri traffic crashes.

### 2. DISCUSSION OF FINDINGS

The following is a discussion of findings obtained from an analysis of Missouri's 2003 traffic crashes related to deer involvement:

### FARS DATA SOURCE

An analysis was conducted of all 2003 Missouri fatal traffic crashes. There were 1,095 such crashes in which 1,232 persons were killed. Four people lost their lives in four fatal crashes involving a vehicle striking a deer and two people died in two crashes where deer were avoided.

### STARS DATA SOURCE

- In 2003, Missouri had 3,819 traffic crashes where deer-vehicle strikes occurred in the first harmful event. One deer strike occurred every 2.3 hours in the State.
- In 2003, 4 people were killed and 374 injured in these types of crashes. One person was killed or injured every 23.2 hours.
- Of all deer strike traffic crashes, 28.4% occurred in an urban area and 71.6% occurred in a rural area of the State. Even though rural areas seem to be overrepresented, the eight highest ranking Missouri counties experiencing this problem are associated with major metropolitan areas. These include: Jackson, Clay, Platte, Jefferson, St. Louis, Boone, Franklin, and St. Charles. Deer strike traffic crashes in these counties account for 37.4% of the total.
- Slightly more than four of five, or 80.9%, of the 2003 deer strike crashes occurred on State-maintained roadways. The greatest proportion occurred on State Numbered Routes (26.1%), followed closely by U.S. Highways (23.4%) and State Lettered Routes (17.4%). An additional 13.2% occurred on Interstates, 11.5% on city streets, and 6.7% on county roads.
- Calculations show slightly less than half, or 46.6%, of the 2003 deer strike crashes occurred from October through December, with the largest proportion in November (22.4%). When discussing this with the Missouri Department of Conservation, they suggested the major cause of increased roadway crossings by deer during this period is mating season. The peak occurs about mid-November. In addition, deer hunting season also may cause an increase in roadway crossings. The slight increase in deer-involved crashes noted in the spring months may be attributed to yearling fawns dispersing from their mothers just prior to the arrival of newborns.
- Friday and Saturday were the most likely weekdays for deer strike crashes to occur. Nearly one in three, or 31.6%, occurred on Friday or Saturday in 2003.
- The majority of deer strike crashes occurred from 5:00 p.m. through 6:59 a.m. This time period accounted for 85.1% of the total.
- Of the drivers striking deer, 59.6% were male and 40.4% were female. The average age of the driver was 39.2 years.
- Of the drivers striking deer, 86.9% had a Missouri driver's license, 12.9% had an out-of-state driver's license, and 0.2% were unlicensed at the time of the crash.

### 3. FINDINGS

The following is a series of tables and figures which characterize Missouri's 2003 deer strike traffic crash problem.

### 2003 MISSOURI FATAL TRAFFIC CRASHES DEER INVOLVEMENT<sup>1</sup>

TYPE OF CRASH	FATAL CRASHES	%	FATALITIES
DEER-VEHICLE STRIKE	4	0.4	4
AVOIDING DEER	2	0.2	2
NO INVOLVEMENT	1,089	99.4	1,226
STATE TOTAL	1,095	100.0	1,232

TABLE 1

<sup>&</sup>lt;sup>1</sup>Source: National Highway Traffic Safety Administration (NHTSA), Fatality Analysis Reporting System (FARS).

## 2003 MISSOURI TRAFFIC CRASHES

### DEER STRIKE INVOLVEMENT

	FATAL		PERSONAL % INJURY	%	PROPERTY DAMAGE	%	TOTAL	%	TOTAL N	TOTAL NUMBER' KILLED INJURED	DRIVERS/PASSENGE OF VEHICLES STRIKING DEER <sup>2</sup> KILLED INJURED	DRIVERS/PASSENGERS OF VEHICLES STRIKING DEER <sup>2</sup> KILLED INJURED
DEERINVOLVED	3	0.3	288	9.0	3,528	2.6	3,819	2.1	4	374	3	362
OTHER INVOLEMENT 1,092	1,092	7.66	45,678	99.4	132,035	97.4	178,805	6.76	1,228	68,747		'
TOTAL	1,095	100.0	1,095 100.0 45,966	100.0	100.0 135,563	100.0	100.0 182,624	100.0	1,232	69,121	ю	362

<sup>&#</sup>x27;This statistic indicates the total number of persons killed and injured in a crash where a deer was struck during the first harmful event in a crash.

TABLE 2

## MISSOURI TRAFFIC SAFETY DEER INVOLVEMENT PROBLEM ANALYSIS CLOCK

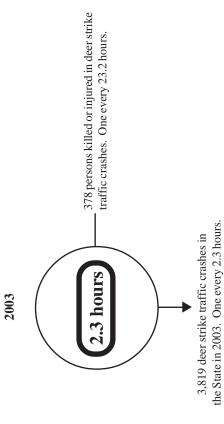


FIGURE 1

<sup>&</sup>lt;sup>2</sup>This statistic indicates the number of drivers and passengers of vehicles striking deer during the first harmful event in a crash who were killed and injured.

### 2003 DEER CRASHES

### AREA CLASSIFICATION BY CRASH SEVERITY

	FATAL	%	PERSONAL INJURY	%	PROPERTY DAMAGE	%	TOTAL	%
URBAN	0	0.0	62	21.5	1,024	29.0	1,086	28.4
RURAL	3	100.0	226	78.5	2,504	71.0	2,733	71.6
TOTAL	3	100.0	288	100.0	3,528	100.0	3,819	100.0

TABLE 3

### 2003 DEER CRASHES

### ROAD CURVATURE BY CRASH SEVERITY

	FATAL	%	PERSONAL INJURY	%	PROPERTY DAMAGE	0/0	TOTAL	%
STRAIGHT	2	66.7	244	84.7	2,323	88.5	2,569	88.1
CURVE	1	33.3	44	15.3	303	11.5	348	11.9
UNKNOWN	0	-	0	-	902	-	902	-
TOTAL	3	100.0	288	100.0	3,528	100.0	3,819	100.0

TABLE 4

### 2003 DEER CRASHES

### ROAD INCLINE BY CRASH SEVERITY

	FATAL	%	PERSONAL INJURY	%	PROPERTY DAMAGE	%	TOTAL	%
LEVEL	2	66.7	164	57.1	1,644	63.1	1,810	62.5
HILL	1	33.3	115	40.1	871	33.4	987	34.1
CREST	0	0.0	8	2.8	91	3.5	99	3.4
UNKNOWN	0	-	1	-	922	-	923	-
TOTAL	3	100.0	288	100.0	3,528	100.0	3,819	100.0

TABLE 5

### 2003 DEER CRASHES

### ROAD CONDITIONS BY CRASH SEVERITY

	FATAL	%	PERSONAL INJURY	%	PROPERTY DAMAGE	%	TOTAL	%
DRY	0	0.0	60	21.0	510	19.5	570	19.6
WET	3	100.0	220	76.9	2,066	78.9	2,289	78.7
SNOW	0	0.0	0	0.0	1	0.0	1	0.0
ICE	0	0.0	4	1.4	28	1.1	32	1.1
SLUSH	0	0.0	1	0.4	0	0.0	1	0.0
MUD	0	0.0	1	0.4	15	0.6	16	0.6
STANDING WATER	0	0.0	0	0.0	0	0.0	0	0.0
MOVING WATER	0	0.0	0	0.0	0	0.0	0	0.0
UNKNOWN	0	-	2	-	908	-	910	-
TOTAL	3	100.0	288	100.0	3,528	100.0	3,819	100.0

TABLE 6

### 2003 DEER CRASHES

### HIGHWAY CLASSIFICATION BY CRASH SEVERITY

	FATAL	%	PERSONAL INJURY	%	PROPERTY DAMAGE	%	TOTAL	%
INTERSTATE	1	33.3	35	12.2	468	13.3	504	13.2
U.S. HIGHWAY	2	66.7	87	30.2	804	22.8	893	23.4
STATE NUMBERED	0	0.0	78	27.1	920	26.1	998	26.1
SINGLE STATE LETTERED	0	0.0	32	11.1	450	12.8	482	12.6
DOUBLE STATE LETTEREI	0 0	0.0	17	5.9	165	4.7	182	4.8
OUTER ROAD	0	0.0	0	0.0	21	0.6	21	0.6
COUNTY ROAD	0	0.0	19	6.6	236	6.7	255	6.7
CITY STREET	0	0.0	17	5.9	423	12.0	440	11.5
INTERSTATE LOOP	0	0.0	2	0.7	6	0.2	8	0.2
OTHER <sup>1</sup>	0	0.0	1	0.4	35	1.0	36	0.9
TOTAL	3	100.0	288	100.0	3,528	100.0	3,819	100.0

 $<sup>^{1}</sup>$ "Other" includes types of roads that are maintained by the State as well as by local jurisdictions.

TABLE 7

2003 DEER CRASHES

# HIGHWAY CLASSIFICATION BY AREA CLASSIFICATION AND CRASH SEVERITY

				URI	URBAN							RURAL	AL			
			PERSONAL		PROPERTY						PERSONAL		PROPERTY			
	FATAL	%	INJURY	%	DAMAGE	%	TOTAL	%	FATAL	%	INJURY	%	DAMAGE	%	TOTAL	%
INTERSTATE	0	0.0	12	19.4	150	14.7	162	14.9	1	33.3	23	10.2	318	12.7	342	12.5
U.S. HIGHWAY	0	0.0	19	30.7	181	17.7	200	18.4	2	299	89	30.1	623	24.9	693	25.4
STATE NUMBERED	0	0.0	111	17.7	189	18.5	200	18.4	0	0.0	19	29.7	731	29.2	798	29.2
SINGLE STATE LETTERED	0	0.0	1	1.6	33	3.2	34	3.1	0	0.0	31	13.7	417	16.7	448	16.4
DOUBLE STATE LETTERED	0	0.0	1	1.6	17	1.7	18	1.7	0	0.0	16	7.1	148	5.9	164	0.9
OUTER ROAD	0	0.0	0	0.0	9	9.0	9	9.0	0	0.0	0	0.0	15	9.0	15	9.0
COUNTY ROAD	0	0.0	1	1.6	36	3.5	37	3.4	0	0.0	18	8.0	200	8.0	218	8.0
CITY STREET	0	0.0	17	27.4	388	37.9	405	37.3	0	0.0	0	0.0	35	1.4	35	1.3
INTERSTATE LOOP	0	0.0	0	0.0	2	0.2	2	0.2	0	0.0	7	6.0	4	0.2	9	0.2
OTHER 1	0	0.0	0	0.0	22	2.2	22	2.0	0	0.0	1	0.4	13	0.5	14	0.5
TOTAL	0	0.0	62	100.0	1,024	100.0	1,086	100.0	3	100.0	226	100.0	2,504	100.0	2,733	100.0

<sup>1</sup>"Other" includes types of roads that are maintained by the State as well as by local jurisdictions.

TABLE 8

### 2003 MISSOURI DEER CRASHES MONTH OF YEAR

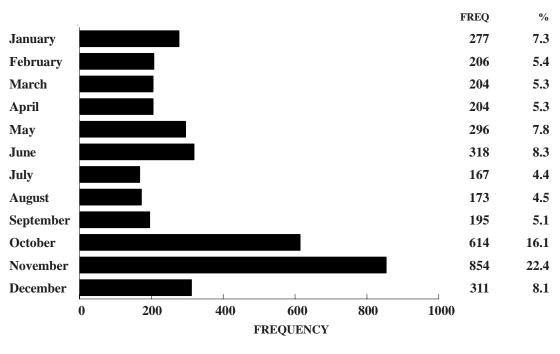


FIGURE 2

### 2003 MISSOURI DEER CRASHES DAY OF WEEK

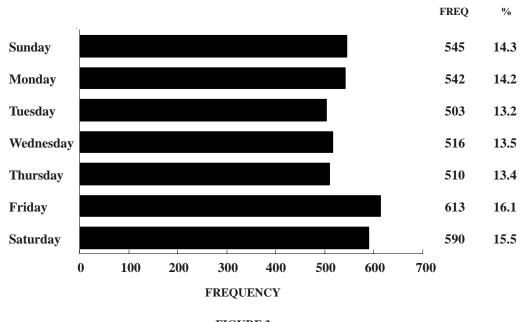


FIGURE 3

### 2003 MISSOURI DEER CRASHES HOUR OF DAY

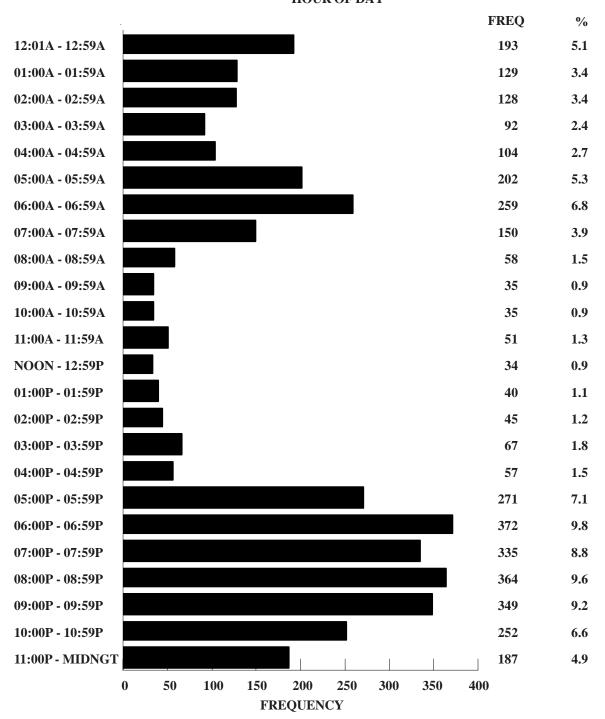


FIGURE 4

**Unknown Data Not Included** 

2003 MISSOURI DEER CRASHES¹

TYPE OF VEHICLE STRIKING DEER BY CRASH SEVERITY

	FATAL	%	PERSONAL INJURY	%	PROPERTY DAMAGE	0/0	TOTAL	%
AUTOMOBILE	1	50.0	153	53.1	1,868	53.0	2,022	53.0
SPORT UTILITY VEHICLE	0	0.0	33	11.5	471	13.4	504	13.2
LIMOUSINE	0	0.0	0	0.0	1	0.0	1	0.0
VAN	0	0.0	38	13.2	341	9.7	379	9.9
BUS	0	0.0	0	0.0	8	0.2	8	0.2
SCHOOL BUS	0	0.0	0	0.0	2	0.1	2	0.1
MOTORCYCLE	1	50.0	38	13.2	3	0.1	42	1.1
MOPED	0	0.0	0	0.0	0	0.0	0	0.0
MOTORHOME / CAMPER	0	0.0	0	0.0	2	0.1	2	0.1
FARM EQUIPMENT	0	0.0	0	0.0	0	0.0	0	0.0
CONSTRUCTION EQUIPMENT	Γ 0	0.0	0	0.0	0	0.0	0	0.0
OTHER TRANSPORT DEVIC	E 0	0.0	0	0.0	2	0.1	2	0.1
PICK-UP TRUCK	0	0.0	24	8.3	722	20.5	746	19.6
OTHER TRUCKS	0	0.0	2	0.7	104	3.0	106	2.8
ALL TERRAIN VEHICLE	0	0.0	0	0.0	0	0.0	0	0.0
UNKNOWN	0	-	0	-	3	-	3	-
TOTAL	2	100.0	288	100.0	3,527	100.0	3,817	100.0

<sup>&</sup>lt;sup>1</sup>This table includes only those vehicles striking a deer during the first harmful event in a crash.

TABLE 9

### VEHICLES STRIKING DEER IN 2003 MISSOURI CRASHES<sup>1</sup>

### DRIVER INVOLVEMENT BY CRASH SEVERITY

	FATAL	%	PERSONAL INJURY	%	PROPERTY DAMAGE	%	TOTAL	%
DRIVERLESS	0	0.0	0	0.0	0	0.0	0	0.0
KNOWN DRIVER INVOLVED	2	100.0	288	100.0	3,526	100.0	3,816	100.0
UNKNOWN DRIVER INVOLVED	0	0.0	0	0.0	1	0.0	1	0.0
TOTAL	2	100.0	288	100.0	3,527	100.0	3,817	100.0

<sup>&</sup>lt;sup>1</sup>This table includes only vehicles striking deer during the first harmful event in a crash.

TABLE 10

### DRIVERS OF VEHICLES STRIKING DEER IN 2003 MISSOURI CRASHES¹ SEX OF DRIVER BY CRASH SEVERITY

	FATAL	%	PERSONAL INJURY	%	PROPERTY DAMAGE	%	TOTAL	%
MALE	2	100.0	159	55.2	1,641	60.1	1,802	59.6
FEMALE	0	0.0	129	44.8	1,091	39.9	1,220	40.4
UNKNOWN	0	-	0	-	795	-	795	-
TOTAL	2	100.0	288	100.0	3,527	100.0	3,817	100.0

<sup>&</sup>lt;sup>1</sup>The table includes only drivers of vehicles striking deer during the first harmful event in a crash.

**TABLE 11** 

DRIVERS OF VEHICLES STRIKING DEER IN 2003 MISSOURI CRASHES  $^1$  AGE OF DRIVER BY CRASH SEVERITY

	FATAL	%	PERSONAL INJURY	%	PROPERTY DAMAGE	%	TOTAL	%
AVERAGE AGE OF DRIVER	36.0	-	38.1	-	39.3	-	39.2	-
14 YEARS AND UNDER	0	0.0	0	0.0	0	0.0	0	0.0
15 - 20 YEARS	1	50.0	38	13.3	316	9.1	355	9.4
21 - 25 YEARS	0	0.0	43	15.0	437	12.6	480	12.8
26 - 30 YEARS	0	0.0	29	10.1	347	10.0	376	10.0
31 - 35 YEARS	0	0.0	26	9.1	379	10.9	405	10.8
36 - 40 YEARS	0	0.0	29	10.1	439	12.6	468	12.4
41 - 45 YEARS	0	0.0	24	8.4	428	12.3	452	12.0
46 - 50 YEARS	0	0.0	34	11.9	349	10.0	383	10.2
51 - 55 YEARS	1	50.0	24	8.4	280	8.1	305	8.1
56 - 60 YEARS	0	0.0	14	4.9	216	6.2	230	6.1
61 - 65 YEARS	0	0.0	12	4.2	129	3.7	141	3.7
66 YEARS AND OVER	0	0.0	13	4.6	158	4.5	171	4.5
UNKNOWN	0	-	2	-	49	-	51	-
TOTAL	2	100.0	288	100.0	3,527	100.0	3,817	100.0

<sup>&</sup>lt;sup>1</sup>This table includes only drivers of vehicles striking deer during the first harmful event in a crash.

**TABLE 12** 

### DRIVERS OF VEHICLES STRIKING DEER IN 2003 MISSOURI CRASHES¹ DRIVER'S LICENSE STATE AND TYPE BY CRASH SEVERITY

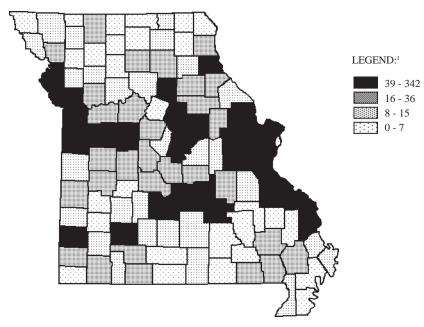
	FATAL	%	PERSONAL INJURY	%	PROPERTY DAMAGE	%	TOTAL	%
MISSOURI								
LEARNER'S PERMIT	0	0.0	1	0.4	0	0.0	1	0.0
OPERATOR'S LICENSE	2	100.0	231	80.2	2,102	79.9	2,335	79.9
MOTORCYCLE ONLY	0	0.0	0	0.0	0	0.0	0	0.0
COMMERCIAL DRIVER'S LICENSE	0	0.0	16	5.6	187	7.1	203	7.0
SUB-TOTAL	2	100.0	248	86.1	2,289	87.0	2,539	86.9
OUTSTATE								
LEARNER'S PERMIT	0	0.0	0	0.0	0	0.0	0	0.0
OPERATOR'S LICENSE	0	0.0	33	11.5	280	10.6	313	10.7
MOTORCYCLE ONLY	0	0.0	0	0.0	0	0.0	0	0.0
COMMERCIAL DRIVER'S LICENSE	0	0.0	4	1.4	59	2.2	63	2.2
SUB-TOTAL	0	0.0	37	12.8	339	12.9	376	12.9
UNLICENSED	0	0.0	3	1.0	4	0.2	7	0.2
UNKNOWN	0	-	0	-	895	-	895	-
TOTAL	2	100.0	288	100.0	3,527	100.0	3,817	100.0

<sup>&</sup>lt;sup>1</sup>This table includes only drivers of vehicles striking deer during the first harmful event in a crash.

**TABLE 13** 

### 2003 DEER STRIKE CRASHES

### COUNTY QUARTILE ANALYSIS



 $^{\scriptscriptstyle 1}\text{LEGEND}$  CATEGORIES ARE BASED ON QUARTILES OF COUNTIES.

RANK	COUNTY	FREQUENCY	PERCENT	RANK	COUNTY	FREQUENCY	PERCENT
1.0	JACKSON	342	9.0	21.5	WARREN	53	1.4
2.0	CLAY	192	5.0	23.0	GREENE	51	1.3
3.0	PLATTE	182	4.8	24.0	CAPE GIRARDEAU	J 49	1.3
4.5	JEFFERSON	178	4.7	25.0	PETTIS	42	1.1
4.5	ST. LOUIS	178	4.7	26.0	COLE	41	1.1
6.0	BOONE	130	3.4	27.0	DENT	40	1.0
7.5	FRANKLIN	110	2.9	28.0	PERRY	39	1.0
7.5	ST. CHARLES	110	2.9			Firs	st Quartile
9.0	JOHNSON	95	2.5				
10.0	PHELPS	79	2.1			Secon	d Quartile
11.0	CASS	72	1.9	30.0	COOPER	36	0.9
12.0	MARION	68	1.8	30.0	CRAWFORD	36	0.9
13.5	BUCHANAN	67	1.8	30.0	VERNON	36	0.9
13.5	CALLAWAY	67	1.8	32.0	BENTON	35	0.9
15.0	ST. FRANCOIS	65	1.7	33.0	NEWTON	34	0.9
16.5	JASPER	62	1.6	34.0	BUTLER	32	0.8
16.5	LACLEDE	62	1.6	36.0	CAMDEN	31	0.8
18.0	STE. GENEVIEVE	E 58	1.5	36.0	MONROE	31	0.8
19.0	RANDOLPH	56	1.5	36.0	SALINE	31	0.8
20.0	PULASKI	54	1.4	38.5	LEWIS	27	0.7
21.5	LINCOLN	53	1.4	38.5	MORGAN	27	0.7

RANK	COUNTY	FREQUENCY	PERCENT	RANK	COUNTY	FREQUENCY	PERCENT
40.5	HARRISON	26	0.7	77.5	CALDWELL	11	0.3
40.5	LAFAYETTE	26	0.7	77.5	HOWELL	11	0.3
43.0	HENRY	25	0.7	82.0	DALLAS	10	0.3
43.0	MACON	25	0.7	82.0	GASCONADE	10	0.3
43.0	MILLER	25	0.7	82.0	NODAWAY	10	0.3
45.5	ST. CLAIR	24	0.6	82.0	OSAGE	10	0.3
45.5	STODDARD	24	0.6	82.0	TEXAS	10	0.3
47.0	MONTGOMERY	23	0.6	85.0	CLINTON	9	0.2
48.0	RALLS	22	0.6	86.0	CARROLL	8	0.2
49.5	TANEY	21	0.5			Thir	d Quartile
49.5	WAYNE	21	0.5				
51.0	MARIES	20	0.5			Fourt	h Quartile
52.0	BARRY	19	0.5	88.0	CEDAR	7	0.2
53.5	CHRISTIAN	18	0.5	88.0	IRON	7	0.2
53.5	RAY	18	0.5	88.0	MADISON	7	0.2
56.0	ANDREW	17	0.4	92.5	GRUNDY	6	0.2
56.0	AUDRAIN	17	0.4	92.5	KNOX	6	0.2
56.0	LINN	17	0.4	92.5	MC DONALD	6	0.2
58.0	RIPLEY	16	0.4	92.5	SCOTLAND	6	0.2
		Secon	nd Quartile	92.5	SHANNON	6	0.2
				92.5	SULLIVAN	6	0.2
		Thir	d Quartile	99.0	ATCHISON	5	0.1
60.5	BATES	15	0.4	99.0	BOLLINGER	5	0.1
60.5	SCHUYLER	15	0.4	99.0	DAVIESS	5	0.1
60.5	STONE	15	0.4	99.0	HICKORY	5	0.1
60.5	WASHINGTON	15	0.4	99.0	LIVINGSTON	5	0.1
63.5	PIKE	14	0.4	99.0	NEW MADRID	5	0.1
63.5	POLK	14	0.4	99.0	WORTH	5	0.1
66.5	DUNKLIN	13	0.3	104.5	CARTER	4	0.1
66.5	GENTRY	13	0.3	104.5	CLARK	4	0.1
66.5	HOLT	13	0.3	104.5	DE KALB	4	0.1
66.5	SHELBY	13	0.3	104.5	DOUGLAS	4	0.1
72.0	CHARITON	12	0.3	109.5	DADE	3	0.1
72.0	LAWRENCE	12	0.3	109.5	HOWARD	3	0.1
72.0	MISSISSIPPI	12	0.3	109.5	MERCER	3	0.1
72.0	MONITEAU	12	0.3	109.5	OREGON	3	0.1
72.0	SCOTT	12	0.3	109.5	PEMISCOT	3	0.1
72.0	WEBSTER	12	0.3	109.5	ST. LOUIS CITY	3	0.1
72.0	WRIGHT	12	0.3	113.0	OZARK	2	0.1
77.5	ADAIR	11	0.3	114.0	PUTNAM	1	0.0
77.5	BARTON	11	0.3	115.0	REYNOLDS	0	0.0

TABLE 14

### 2003 DEER STRIKE CRASHES

### **CITY LISTING**

RANK	CITY	FREQUENCY	PERCENT <sup>1</sup>
1.0	KANSAS CITY	295	22.9
2.0	LEE'S SUMMIT	59	4.6
3.0	COLUMBIA	51	4.0
4.0	INDEPENDENCE	45	3.5
5.0	ST. JOSEPH	33	2.6
6.0	CHESTERFIELD	31	2.4
7.0	BLUE SPRINGS	25	1.9
8.5	HANNIBAL	23	1.8
8.5	PARKVILLE	23	1.8
10.5	JOPLIN	21	1.6
10.5	SPRINGFIELD	21	1.6
13.0	CAPE GIRARDEAU	20	1.6
13.0	LIBERTY	20	1.6
13.0	WILDWOOD	20	1.6
15.0	JEFFERSON CITY	19	1.5
16.5	FULTON	18	1.4
16.5	GRANDVIEW	18	1.4
18.5	OSAGE BEACH	15	1.2
18.5	WEBB CITY	15	1.2
20.0	NEOSHO	14	1.1
21.0	ROLLA	13	1.0
23.0	JACKSON	12	0.9
23.0	O'FALLON	12	0.9
23.0	WENTZVILLE	12	0.9
25.5	ARNOLD	11	0.9
25.5	ST. PETERS	11	0.9
29.0	OZARK	10	0.8
29.0	PACIFIC	10	0.8
29.0	SUNSET HILLS	10	0.8
29.0	TOWN AND COUNTRY	10	0.8
29.0	WARRENSBURG	10	0.8
33.0	BOONVILLE	9	0.7
33.0	PEVELY	9	0.7
33.0	ST. ROBERT	9	0.7
38.0	BELTON	8	0.6
38.0	HARRISONVILLE	8	0.6
38.0	LAKE LOTAWANA	8	0.6
38.0	MOBERLY	8	0.6
38.0	NEVADA	8	0.6
38.0	ST. CHARLES	8	0.6
38.0	WAYNESVILLE	8	0.6
45.0	BRANSON	7	0.5
45.0	EXCELSIOR SPRINGS	7	0.5
45.0	HERCULANEUM	7	0.5
45.0	LEBANON	7	0.5
45.0	MARYLAND HEIGHTS	7	0.5
45.0	MOSCOW MILLS	7	0.5
45.0	WARRENTON	7	0.5
50.0	FARMINGTON	6	0.5
50.0	KIRKWOOD	6	0.5
50.0	UNION	6	0.5

 $^{1}$ Percentage is based on deer involved crashes which occurred in Missouri municipalities with populations of 1,000 or more. Only those municipalities comprising 0.5% or more of these crashes are listed.

### **TABLE 15**